Five-year Report to the Legislature on

Ecological Reserves

April 1, 2004 - March 31, 2009

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Photo Credits

The cave photos are courtesy of Kim Monson, on behalf of the Manitoba Speleological Society.

The Baralzon Lake Ecological Reserve photos are courtesy of Karen Johnson.

Cover photo: Brokenhead River, Brokenhead River Ecological Reserve. This ecological reserve was established to protect rare mature river-bottom forest.

Back cover photo: Colonial bird nesting area, Kaweenakumik Islands Ecological Reserve.

To His Honour
The Honourable Philip S. Lee
Lieutenant-Governor of Manitoba

Your Honour:

I am pleased to present the Five-year Report to the Legislature on Ecological Reserves for the period April 1, 2004 to March 31, 2009. Ecological reserves set aside outstanding examples of Manitoba's unique sites and landscapes.

During the past five years, work continued to protect representative and unique portions of Manitoba's natural habitats and landscapes. The Ecological Reserve Program and the Ecological Reserves Advisory Committee drafted nominations for eight proposed ecological reserves, recommended nominations for five proposed ecological reserves and continued efforts to increase their information base on proposed ecological reserves and other ecologically significant areas.

I am very pleased to report that six new ecological reserves were also designated within this reporting period. The six new ecological reserves designated included Little George Island, Jennifer and Tom Shay, Brokenhead Wetland, Armit Meadows, Birch River and Whitemouth Bog ecological reserves. Interim protection of two candidate sites as park reserves was extended to allow for further consultations. An extremely unique parcel of private land was also purchased in southeast Manitoba with the intent of designating the parcel as an ecological reserve.

Yours sincerely,

Bill Blaikie
Minister

To the Honourable Bill Blaikie
Minister of Conservation

Sir:

I am pleased to provide this Five-year Report to the Legislature on Ecological Reserves for the period April 1, 2004 to March 31, 2009. The report provides an overview of the status of the Ecological Reserves Program and describes activities that have taken place during this period.

Ecological reserves are one of several designations in the network of protected areas administered by Manitoba Conservation. As Manitoba's most-protected provincially designated areas, ecological reserves set aside outstanding examples of Manitoba's ecologically unique sites and representative landscapes.

During the past five years, work continued to protect Manitoba's natural habitats and landscapes. The Ecological Reserves Advisory Committee - appointed in accordance with The Ecological Reserves Act - continued its efforts to increase the number of significant areas protected as ecological reserves. It nominated five new candidate areas for consideration, bringing the total number of nominated candidate ecological reserves that still await consultation, review and possible designation to 17. Interim protection as park reserves of two candidate sites was extended to allow for further consultations. An extremely unique parcel of private land in southeast Manitoba was purchased with the intent of designating the parcel as an ecological reserve. Most exciting of all, six new ecological reserves -Little George Island, Jennifer and Tom Shay, Brokenhead Wetland, Armit Meadows, Birch River and Whitemouth Bog- were established.

Yours sincerely,

Fred Meier
Deputy Minister

Executive Summary

Manitoba's system of ecological reserves consists of sites established under *The Ecological Reserves Act*. Manitoba's conservation minister currently administers the act. Ecological reserves are the most protected of the provincially designated sites within the network of protected areas in Manitoba. They play a unique role in setting aside a significant and representative portion of land in its most natural state, free from intensive recreational development or resource harvest. To date, 22 ecological reserves totalling 61,456 hectares have been designated.

Figure 1: Baralzon Lake ER

Between April 2004 and March 2009, the Ecological Reserves Advisory Committee met 12 times. The committee focused on drafting nominations from a list of some 50 candidate sites identified during the previous reporting period. Nine new candidate sites were identified during the current reporting period. By March 31, 2009, 17 sites nominated by the committee were pending internal government review and external consultation prior to designation of ecological reserve status. The conservation minister refers nominated sites to this internal government and external review process. Ten nominations were nearing completion. Preliminary work began on drafting nominations for six other sites and work was pending on 28 other sites identified for committee consideration.

Park reserve status was renewed for five years for two sites originally nominated as ecological reserves. Continued interim protection allows discussions to take place with First Nations and stakeholders towards their pending designation as ecological reserves. Six new ecological reserves were designated during this reporting period.

Background information on the five ecological reserves designated during this reporting period, and copies of the three previous Five-year Report to Legislature on Ecological Reserves were posted on the Ecological Reserves Program website at: **manitoba.ca/conservation/parks/ecological_reserves/index.html.** The Five-year Report to Legislature on Ecological Reserves April 1999 to March 2004 was printed in English only.

Research activities in ecological reserves within this reporting period were higher than in the past. During this reporting period, eight different research projects were conducted in seven different ecological reserves. Only one project in one ecological reserve was conducted during the 1999 to 2004 reporting period. Studies in ecological reserves were undertaken mainly by universities, government and non-government organizations. Projects included:

- monitoring spruce budworm *(Meteorus trachynotus)* in Lake Winnipegosis Salt Flats Ecological Reserve

- studying eastern white cedar *(Thuja occidentalis)* dynamics in Long Point and Brokenhead Wetland ecological reserves
- collecting orchid seeds in Libau Bog and Brokenhead Wetland ecological reserves as part of the Agriculture and Agri-Food Canada wild seeds preservation project
- studying of reptile, amphibian and fish populations in Little George Island Ecological Reserve
- studying bat viral disease in Lake St. George Caves Ecological Reserve
- conducting paleo-ecology studies in Baralzon Lake Ecological Reserve
- monitoring forest vegetation in Cowan Bog
- studying bat movements in Lake St. George Caves Ecological Reserve

As in previous reports, the Ecological Reserves Advisory Committee **(ERAC)** made several recommendations on how to improve the Ecological Reserves Program. In summation ERAC recommends that:

- the rate at which ecological reserves are protected needs to increase if the province desires to sufficiently protect lands
- knowledgeable and interested members of the public should be encouraged to become more involved in the process of conservation
- the Ecological Reserves Program should work more closely with other protection and conservation-minded programs and committees such as the Endangered Species Advisory Committee
- since ecological reserves offer the highest level of protection of any protected area designation within the province, the amount of land protected under the Ecological Reserves Program should be expanded in number and area to ensure that important ecological features are protected for future generations

Introduction

The Five-year Report to the Legislature is a requirement of an amendment to *The Ecological Reserves Act*, assented to December 22, 1989. The act calls for a report every five years presenting information about the status, management and use of ecological reserves. This is the fourth such report. The first, covering the period April 1, 1989 to March 31, 1994, was printed in English only and distributed to members of the legislative assembly on July 25, 1995. The second, covering April 1, 1994 through March 31, 1999, was printed in English only and tabled in the legislature on April 18, 2001. The third report, covering April 1, 1999 to March 31, 2004, was the first such report to be translated into French. It was printed in English only, but French and English versions were posted on the Manitoba Conservation website on January 22, 2007.

This report, covering the period of April 1, 2004 to March 31, 2009, provides an overview and background of the program, discusses activities during the reporting period, and provides recommendations for future action. As with the previous five-year report, the Ecological Reserves Advisory Committee has provided recommendations as an appendix to this report.

Figure 2: Entry sign at Wampum Ecological Reserve

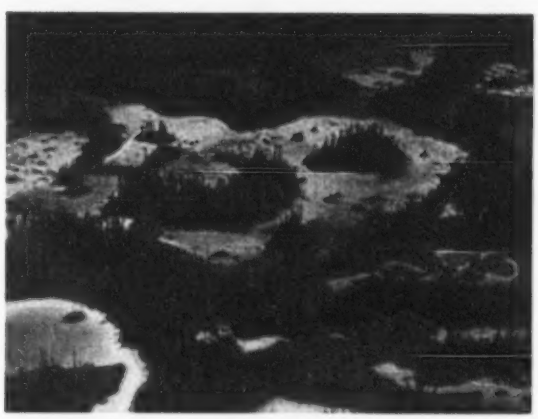


Figure 3: Aerial view of Palsa Hazel Ecological Reserve showing treed palsa mounds surrounded by wetland

Program Overview

Policy Framework

Manitoba's Ecological Reserves Program grew out of the world-wide effort to inventory shrinking natural resources as part of the International Biological Program (IBP). Canada joined the IBP in 1964 and sites in Manitoba were surveyed from 1968 to 1973. Manitoba's Ecological Reserves Program began in 1973, with the first ecological reserve established in 1976. The first four ecological reserves were established under *The Crown Lands Act*. Passage of the first *Ecological Reserves Act* in 1981 led to all subsequent ecological reserves being established under this legislation. Since the inception of the Ecological Reserves Program in 1973, on average, an ecological reserve is designated every 19 months. To date, a total of 22 ecological reserves have been established covering a total of 66,476 hectares (Table 1, Map 1). Although they are very important areas, the majority of ecological reserves are small and make up approximately one per cent of the total lands protected in Manitoba (over 5.4 million hectares). Through efforts to set aside unique and representative examples of the earth's biodiversity and landscapes, ecological reserves directly support key elements of many national and international commitments and agreements. These include:

- 1989 World Wildlife Fund Canada Endangered Spaces Campaign
- June 1992 United Nations Convention on Biodiversity, and the subsequent Programmes of Work on Protected Areas agreed to at subsequent Conferences of the Parties to implement the convention
- November 25, 1992 federal-provincial-territorial Statement of Commitment to Complete Canada's Network of Protected Areas

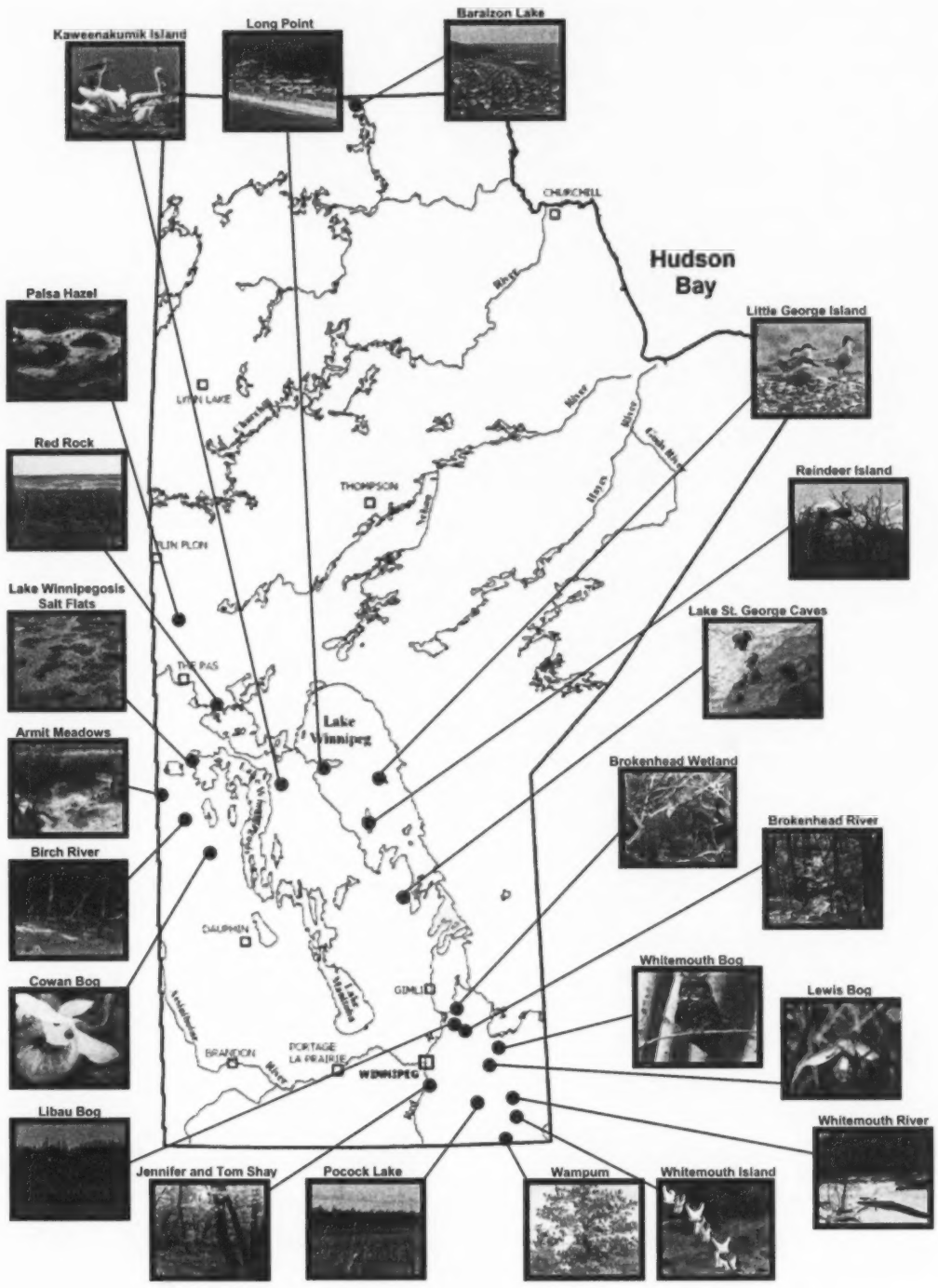
Ecological reserves also directly support key elements of provincial strategies and commitments:

- December 2005 Manitoba's Green and Growing Strategy which cites protecting natural areas as one of the seven priority areas of focus for government
- the 2007 Throne Speech which states the need for new protection for sensitive ecological treasures

Table 1: List of Ecological Reserves

Name	Year Created	Area (ha)	Ecosystems Represented and Outstanding Features
Armit Meadow	2005	263	fescue prairie meadows in spruce forest, riparian habitats
Baralzon Lake	1989	39,600	low arctic tundra, lakes and rivers, rare arctic plants
Birch River	2005	183	diverse forest and wetland communities on escarpment complex
Brokenhead River	1978	64	mixed wood river-bottom forest
Brokenhead Wetland	2005	563	calcareous fen with diverse flora
Cowan Bog	1983	518	spruce bog and associated lakes, rare orchids
Jennifer and Tom Shay	2004	7	deciduous river bottom forest
Kaweenakumik Islands	1989	63	colonial nesting birds and caribou use
Lake St. George Caves	1997	49	caves in limestone karst, Manitoba's largest-known bat hibernacula
Lake Winnipegosis Salt Flats	1992	573	saline flats and gradients, open freshwater lake, spruce forest
Lewis Bog	1987	569	fen, rare orchids
Libau Bog	1989	180	black spruce/tamarack bog, floating sedge bog, orchids
Little George Island	2004	15	colonial nesting birds: Caspian and common tern, greater scaup
Long Point	1987	1837	beach ridges and bogs, eastern white cedar
Palsa Hazel	1997	1648	permafrost features - palsa mounds and scars in unfrozen wetlands
Pocock Lake	1982	157	transition from upland ancient beach ridge to bog lake
Red Rock	1979	502	white spruce beach ridge and marsh, northern-most bur oak
Reindeer Island	1976	13,860	mature upland forest and bogs on island in Lake Winnipeg
Wampum	1978	62	remnant mature red pine stand
Whitemouth Bog	2009	5020	calcareous fen, rare and unique species
Whitemouth Island	1999	613	deciduous eastern forest with several Manitoba rare plant species
Whitemouth River	1986	130	mixed-wood forest, distinct lowland riverbank species

Map 1. Map of Existing Ecological Reserves as of March 31, 2009



Legislative Requirements

The Ecological Reserves Act specifies the purpose of ecological reserves, how they are administered and what activities are permitted within them. In Manitoba, ecological reserves can only be established on Crown land. They preserve unique and representative plants, animals, geological features, natural landscapes and ecological processes. They can include both natural and modified ecosystems. Ecological reserves are not set aside as recreational, resource-harvest or multiple-use areas. Under permit, ecological reserves may be used for research, education and nature study.

Ecological reserves are the most protected category of designated provincial lands in Manitoba. Until 1993, ecological reserves were the only provincially designated lands that met the requirements of the World Wildlife Fund Canada Endangered Spaces Campaign for protected areas — areas that are legally protected from intensive industrial, recreational and agricultural development. Because ecological reserves are Manitoba's most protected areas, prior approval from the conservation minister is required to conduct any activity in an ecological reserve. The Ecological Reserves Advisory Committee reviews proposals for scientific research and management activities in ecological reserves before submitting them to the minister for a decision. However, general ministerial orders allow people to enter and travel through most ecological reserves on foot without need to obtain a specific permit. All activities that have the potential to negatively affect ecological reserves, or the features that they protect, are prohibited. Traditional land use by First Nations people is generally permitted. If the feature being protected by an ecological reserve could be at risk by traditional use, government will consult with First Nations about treaty and legal obligations. The goal is to ensure conservation of the feature, while accommodating traditional use to the greatest extent possible.

Figure 4: Pitcher plants are found in many wetland ecological reserves

Figure 5: Wood lily, Lewis Bog Ecological Reserve

Reporting Period Activities

Action on Commitments and Recommendations from Previous Five-year Report

The previous *Five-year Report to the Legislature* on Ecological Reserves identified four broad areas that were to be the focus during the 2004 to 2009 reporting period:

1. Review all proposed candidate ecological reserves and all previously nominated sites that have been pending for a number of years.
2. Continue and expand efforts to provide timely information to the public on ecological reserves and ecological issues.
3. Begin work on developing a regulation to clarify the permitted uses and activities in ecological reserves.
4. Continue efforts to evaluate ways of streamlining the review and consultation process to quicken the establishment of proposed ecological reserves.

Towards the end of this reporting period, a review of all proposed candidate ecological reserves and previously nominated sites was conducted. Based on this review, 15 candidate ecological reserves were selected as priorities during the next five year reporting period. Work on these sites will focus on undertaking discussions with First Nations and stakeholders towards the designation of the majority of these sites during the next reporting period.

Background information on the ecological reserves designated during this reporting period was posted on the ecological reserves website. Draft profiles were written for the 16 pre-existing ecological reserves, and the newest ecological reserve — designated March 26, 2009. It is anticipated that these will be posted to the website during the 2009 to 2014 reporting period. No work was done on developing a regulation that clarifies permitted uses and activities within ecological reserves. Planning exercises between staff of the Ecological Reserves Program and the Protected Areas Initiative continued throughout the reporting period to streamline the review and consultation processes and quicken the establishment of ecological reserves.

Other efforts of the Ecological Reserve Program and the Ecological Reserves Advisory Committee during the reporting period included:

- drafting nominations for eight proposed ecological reserves
- recommending nominations for five proposed ecological reserves
- performing reviews and consultations on six nominated ecological reserves leading to their final designation and protection
- continuing efforts to increase the information base on proposed ecological reserves and other ecologically significant areas that could be potential ecological reserves

Policy and Program Administration

While no new policy documents were developed during this reporting period, three provincial strategies and commitments relating to the Ecological Reserves Program were developed.

In December of 2005, Manitoba's green strategy *Green and Growing* was published. The province responded to one of the seven priorities in the report by committing to protecting natural areas and to continue increasing the number of ecological reserve designations.

One objective of this priority is to ensure that biodiversity is adequately protected and maintained. Two activities related to the Ecological Reserves Program designed to meet this objective were developed:

- designating five new protected areas between 2006 and 2010 (including ecological reserves)
- preparing long-term strategies for managing the biodiversity of protected lands

In May 2005, two new members were appointed to the Ecological Reserves Advisory Committee and the four existing members were re-appointed. In October 2008, all six committee members were re-appointed for another two-year term. The committee met 12 times between April 1, 2004 and March 31, 2009. Individual members of the committee met officially with the conservation minister and/or deputy minister twice in this period. The committee continued to be the only external government advisory committee with a mandate to provide advice on, and recommend and promote, areas worthy of protection as ecological reserves.

Staffing

This reporting period saw several changes in staff and organization within the provincial government Ecological Reserves Program. In the spring of 2007, responsibility for the Protected Areas Initiative (PAI) moved from reporting to the assistant deputy minister, programs division, to reporting to the director of sustainable resource and policy management branch in the environmental stewardship division. In 2007, the director responsible for ecological reserves retired and a new director started in November 2007. In the same year, the manager responsible for ecological reserves accepted a new position within government. A new manager started in July 2008. In September 2008, a new staff member responsible for the Ecological Reserves Program was hired to fill the position that was going to be vacated by the retiring staff member.

Site Nominations and Reviews

Proposals for nine candidate ecological reserves were submitted to the Ecological Reserves Advisory Committee during this reporting period. Two of these sites were identified as candidate ecological reserves through the Protected Areas Initiative review process. Two candidate ecological reserves were nominated by the Mixedwood Forest Society, four by Native Orchid Conservation Inc. and one by the Parks and Natural Areas Branch of Manitoba Conservation. The Ecological Reserves Advisory Committee submitted nominations for five recommended ecological reserves to the minister during this reporting period.

In 2007, Manitoba purchased a quarter section of land in southeast Manitoba with the intention of designating it as an ecological reserve. This property is adjacent to Moose Lake Provincial Park. This site is significant as it is the only known location in Manitoba where all three native pine species (eastern white pine, red pine and jack pine) grow together. It is at the northwestern edge of the range of eastern white and red pines.

Nominations on 10 proposed ecological reserves were nearing completion by the end of this reporting period. Draft nominations existed for six other sites and nominations were yet to be drafted for 28 candidate sites. At the end of this reporting period, there were 44 proposed candidate ecological reserves, 17 nominated ecological reserves and two nominated ecological reserves that have interim protection as park reserves.

Designations

Six new ecological reserves were designated during this reporting period: Little George Island, Jennifer and Tom Shay, Brokenhead Wetland, Armit Meadows, Birch River and Whitemouth Bog. These six ecological reserves protect 6,051 hectares of unique and representative ecological features. They make up 9.1 per cent of all hectares of land designated as ecological reserves and include the third largest ecological reserve designated to date (Whitemouth Bog Ecological Reserve).

Little George Island Ecological Reserve

Little George Island Ecological Reserve, designated in the spring of 2004, was created to preserve and protect prime nesting habitat for colonial nesting birds, including Caspian tern (*Hydroprogne caspia*), common tern (*Sterna hirundo*) and greater scaup (*Aythya marila*). Each breeding season thousands of nests can be found on the island. Little George Island Ecological Reserve is also the most southerly documented nesting area for the greater scaup (*Aythya marila*).

Jennifer and Tom Shay Ecological Reserve

Jennifer and Tom Shay Ecological Reserve, designated in the fall of 2004, was created to preserve and protect rare, river-bottom forest habitat. This type of habitat, and the organisms that reside in it, are unusual in that they must tolerate periodic flooding. Research conducted in the ecological reserve has also led to a better understanding of the origins, historical climate, flood patterns and geological history of the Red River Valley by analyzing tree rings and radiocarbon

Figure 6: Entry sign at Jennifer and Tom Shay Ecological Reserve

dating charcoal obtained from the site. The site contains artifacts indicating human occupation up to 2000 years ago, with a potentially older cultural stratum below.

Brokenhead Wetland Ecological Reserve

Brokenhead Wetland Ecological Reserve, designated in the summer of 2005, was created to preserve and protect a calcareous fen, a wetland type considered rare in North America. The ecological reserve contains 23 species of provincially rare and uncommon plants as well as 28 of Manitoba's 36 native orchid species.

Armit Meadows Ecological Reserve

Armit Meadows Ecological Reserve, designated in the fall of 2005, was created to preserve and protect remnants of the endangered fescue prairie. These meadows exist within a spruce forest matrix. These meadows, totalling approximately seven hectares in size, are the most northerly known location of fescue prairie in Manitoba. The small fescue meadows support species unlikely to be found elsewhere in this region of Manitoba. It is an important reservoir for biodiversity and represents northerly-adapted genetic gene pools.

Birch River Ecological Reserve

Birch River Ecological Reserve, designated in the fall of 2005, was created to preserve and protect the exceptionally rich biodiversity found within it. The ecological reserve's complex physical environment enables it to support several diverse plant communities. The site includes parts of three beach ridges formed by former Glacial Lake Agassiz. The beach ridges support various forest communities. Several rare and uncommon species thrive within the ecological reserve including 17 orchid species, representing over 40 per cent of Manitoba's orchid flora. The Birch River area also supports a diverse and noteworthy small-mammal population.

Figure 7: Entry sign at Birch River Ecological Reserve

Whitemouth Bog Ecological Reserve

Whitemouth Bog Ecological Reserve, designated in the spring of 2009, is the third largest ecological reserve in Manitoba. It was created to protect and preserve the wetland complex — notably the calcareous fen — and several species considered to be rare, of concern or otherwise noteworthy. These species include the rose pogonia (*Pogonia ophioglossoides*), twig rush (*Cladium mariscoides*), slender-leaved sundew (*Drosera linearis*) and yellow rail (*Coturnicops noveboracensis*). Whitemouth Bog is also the only known location for Canada rush

(*Juncus canadensis*) in Manitoba and provides wintering habitat for the great grey owl (*Strix nebulosa*) and northern hawk owl (*Surnia ulula*).

Park reserve status was renewed on the two nominated ecological reserves that were designated as park reserves during the last reporting period: Pelican Islands and Walter Cook Caves (Table 2 and Map 2). Park reserve designation gives the two sites legal interim protection to allow for further discussion on final boundaries and the feasibility of establishing them as ecological reserves. Kinonjeoshtegon First Nation and Misipawistik Cree Nation supported the ongoing protection of the respective sites within their traditional territories. Misipawistik Cree Nation is undertaking a long-term community planning process for its traditional territory. Renewal of the Walter Cook Caves as a park reserve gives the community time to determine the nature and level of protected areas the community would like to see established.

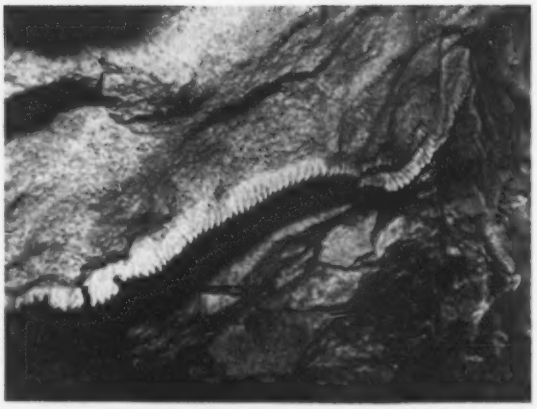


Figure 8: A dripstone feature in the Iguana Crypt Cave within Walter Cook Caves Park Reserve.

Table 2: Park Reserves Initially Proposed as Ecological Reserves

Name	Date Created	Date Expires	Area (ha)	Ecosystems Represented and Outstanding Features
Pelican Islands	June 2001	Dec.14, 2011	130	largest known colonies of nesting American white pelicans and common terns on Lake Winnipeg
Walter Cook Caves	Aug. 2001	March 14, 2012	3200	karst features, caves, bat hibernacula for little brown bats, occasionally joined by northern long-eared and big brown bats

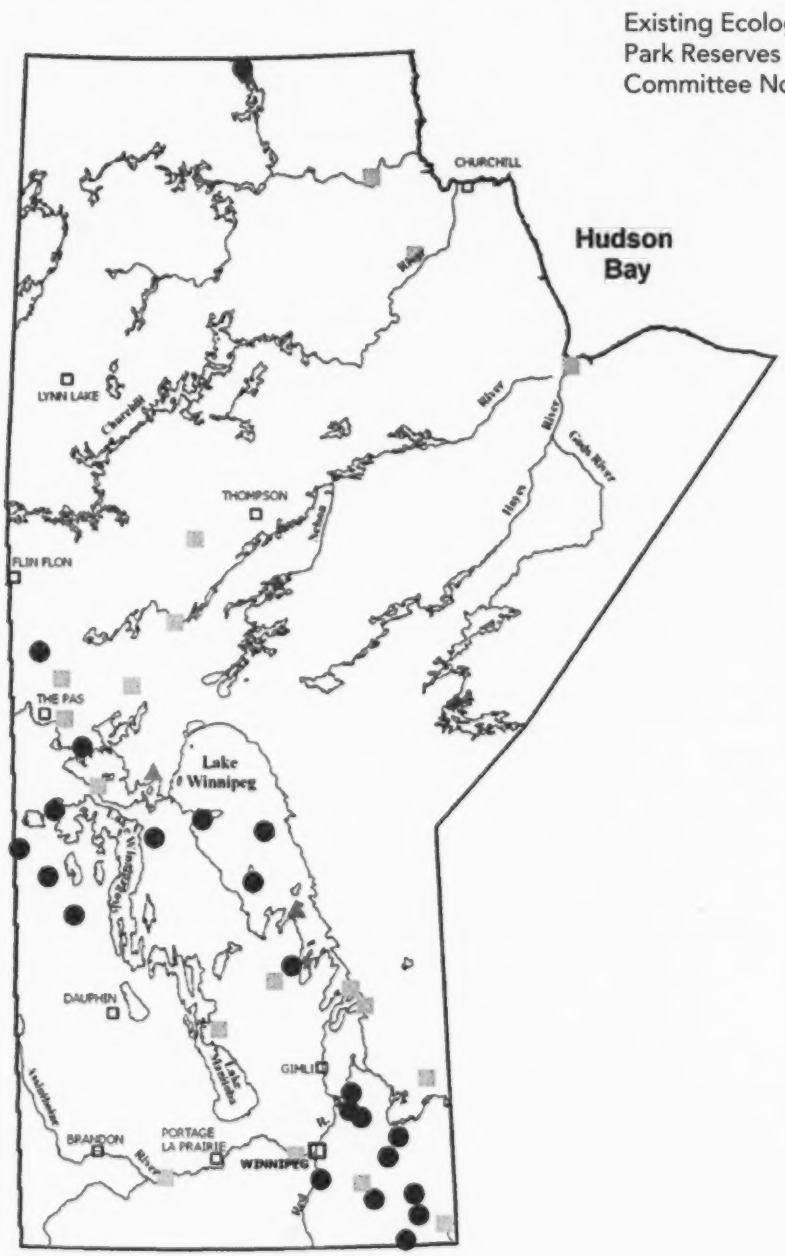
At the end of this reporting period, 17 nominated, proposed ecological reserves - for which recommendations had previously been submitted to the minister - were awaiting consultation and review (Table 3, Map 2). All these nominated, proposed ecological reserves had been recommended in previous reporting periods for which 1989 was the earliest and 2002 was the latest. Amber Beach Proposed Ecological Reserve is within a proposed treaty land entitlement (TLE) selection area and designation will likely not be pursued, but it will remain on the books until this TLE selection is finalized. It is important that review and consultation be initiated on these sites quickly, as several face immediate threats to their ecological integrity. These threats include, but are not limited to, the following: quarrying, adjacent peat mining, logging, hydro development, and mining exploration.

Table 3: Proposed Ecological Reserves that the Ecological Reserves Advisory Committee has Recommended for Protection that have not Yet Been Designated

Name	Year Recommendation Submitted to Minister	Proposed Area (ha)	Ecosystems Represented and Outstanding Features
Amber Beach	1999	TBD	only known deposits of Cretaceous amber in Manitoba
Assiniboine River Clam Beds	2000	100	eleven of the twelve species of clam found in the Assiniboine River including one rare five uncommon species
Balsam Willow (Ste. Anne Bog)	2000	320	a rich peat complex that contains rare plant species and localized bird species
Black Island Red Pine	2000	210	most north-westerly stand of red pine in North America
Dog Lake Islands	1999	580	nesting sites for great egret, great blue heron, American white pelican, double-crested cormorant, and ring-billed gull; only known location in Manitoba for the great egret
High Rock Lake	1999	3900	features caused by the effects of a meteor impact crater exposing acidic granite outcrops in the regional basic limestone matrix; habitats found more commonly on Precambrian Shield areas
Little Frog Creek	2000	1800	one of the best examples of ribbon channels in the Prairie Provinces
Marsh Point	1999	22,000	junction of terrestrial, freshwater, riverine, estuary, tidal flat, and marine ecosystems
Mitchell Lake (Marl Pond)	1989 resubmitted 1999	220	intact, undisturbed limestone cliffs; three rare species of fern
North Moose Lake	1989	4900	wide variety of boreal forest communities ranging from mature upland forest to patterned bogs/fens and shallow lakeshore marshes
Partridge Crop Hill	1999	56,500	unusually large, contiguous stand of old jack pine; caribou rutting and over-wintering grounds
Pipestone Rocks	1999	3	nesting sites for a variety of colonial nesting birds; a unique formation of granite rocks extending above water level in a columnar shape

Seal River	2002	250,000	inland harbour seals; estuary is a major feeding and moulting site for beluga whales; arctic ground squirrels at the south-eastern edge of their range
Spirit Sands	2002	750	part of the most extensive region of sand dunes in the province, and possibly the highest biodiversity in the province
Springer Lake-Peterson Creek	2002	900	populations of green frog, mink frog and water shrew
Tyrrell Beach Ridge	2001	350,000	one of the most prominent portions of the beach ridge complex that documents the extent of the former Tyrrell Sea
White Forest Rapids	1989	1,550	mixture of undisturbed muskeg, riverbank and riverine systems

Map 2: Status of Sites Nominated as Ecological Reserves as of March 31, 2009



Research Activities

Research activities within this reporting period were higher than in the past. Studies were undertaken mainly by universities, government and non-government organizations.

Spruce Budworm

In 2004, stands of spruce (Picea spp.) in the Lake Winnipegosis Salt Flats Ecological Reserve were sampled by Manitoba Conservation's Forestry Branch as part of a study examining the history of spruce budworm (Meteorus trachynotus) outbreaks in the Boreal Plain Region. The Forestry Branch also established long-term, annual monitoring plots for spruce budworm (Meteorus trachynotus) in this ecological reserve using pheromone traps. This spruce budworm (Meteorus trachynotus) monitoring occurred through the summer of 2007. Through 2007, the spruce budworm (Meteorus trachynotus) population remained at normal levels and defoliation was light.

Eastern White Cedar

In the summer of 2005 and 2006, researchers with the University of Winnipeg undertook a study in Long Point Ecological Reserve as part of a larger study examining the dynamics of eastern white cedar (Thuja occidentalis) at the north-western limits of its range in Canada and to reconstruct drought events for the past three centuries using tree ring (dendrochronological) techniques. In 2006, this research permit was renewed and expanded to include Brokenhead Wetland Ecological Reserve. Within the Long Point Ecological Reserve the oldest eastern white cedar (Thuja occidentalis), found on The Pas moraine, dated back to 1715. The oldest white spruce dated back to 1750.

Native Orchids

In the spring and summer of 2007 and 2008, Native Orchid Conservation Inc. collected seeds from native orchids in Libau Bog and Brokenhead Wetland Ecological Reserves. This was done in accordance with a national program, led by Agriculture and Agri-Food Canada, to preserve seeds of wild plants in support of Canada's international commitment at the United Nations Convention on Biodiversity held in Rio de Janeiro in 1992. In 2007, one seed capsule of dragon's mouth orchid (Arethusa bulbosa) and six seed capsules from lesser rattle-snake orchid (Goodyera repens) were collected from Brokenhead Wetland Ecological Reserve. In 2008, three heart-leaf twayblade (Listera cordata) seed capsules were collected in Brokenhead Wetland Ecological Reserve.

Reptiles, Amphibians and Fish

In the summer of 2007, the Manitoba Museum undertook a study of reptiles (especially red-sided garter snakes), amphibians and fish in Little George Island Ecological Reserve near the island as part of a snake morphological and genetic diversity study. Results showed that there was great variability in colour in the red-sided garter snakes examined. Five fish species (emerald shiner, spottail shiner, longnose dace, mottled sculpin and logperch), two amphibian species (Canadian toad and boreal chorus frog) and over 65 bird species were observed.

Bat Diseases

In 2007, research on bats carried out by Manitoba Conservation's Wildlife and Ecosystem Protection Branch and the Western College of Veterinary Medicine continued in Lake St. George Caves Ecological Reserve. This study included trapping and banding

bats returning to the hibernaculum in the ecological reserve. An additional 20 bats were taken for laboratory study and analysis of viral diseases they may carry. This study of viral diseases is a pilot project in Canada, since virtually nothing is known about viral diseases - other than rabies - that bats may carry. Two other diseases were detected in the bats sampled; a group 1-coronavirus and a yet un-described polyomavirus.

Climate Change

In the summer of 2008, Baralzon Lake Ecological Reserve was included in a paleo-ecological research project in the Nejanilini Lake area being conducted by researchers with St. Olaf College in Minnesota. The project focused on climate change over the past 8000 years. Lake water, sediment, peat and soil samples were collected for laboratory analysis and study. Lakes in Baralzon Lake Ecological Reserve were among the potential lakes to be sampled. This study was the first of its kind in this part of Manitoba and would tie into similar studies in the Northwest Territories and other parts of Canada as part of the International Polar Year.

Orchids and Rare Plants

Long-term permanent vegetation monitoring plots were established, and biological surveys were conducted, focussing on orchids and rare plants within Cowan Bog Ecological Reserve in the summer of 2008. This project was developed to review the proposed Louisiana-Pacific Canada harvest near Cowan Bog and to address concerns of the potential long-term hydrological implications for the ecological reserve. Detailed review led to modification of the harvesting plans and concluded that little effect on the hydrology within the ecological reserve would be attributable to logging. It was still recommended, however, that monitoring plots be maintained to help evaluate future land-use activities, including logging, in the general area.

Bat Activities

In the fall of 2008 a study was undertaken by researchers at the University of Winnipeg in Lake St. George Caves Ecological reserve to live trap, study, band, and release bats as the bats gather in mating swarms prior to entering the hibernaculum cave. Captured bats were implanted with miniature electronic monitoring devices under the skin that will allow for passive monitoring of bat activity throughout the province for several years. Remote data-logging equipment was also left around the mouth of and within the cave to record such factors as temperature and bat movement.

Research permits were issued for two other projects, but these studies did not take place and therefore are not reported on here.

Access Requests

In 2005, Manitoba Transportation and Government Services (TGS) developed plans to upgrade a bridge on PTH 10 along the western boundary of Lake Winnipegosis Salt Flats Ecological Reserve. All direct project construction activities were to be located outside the ecological reserve but engineering studies indicated that lowering water levels at the construction site by removing beaver dams in the area could make the work easier. One beaver dam was located in the ecological reserve. TGS requested approval to remove the beaver dam inside the ecological reserve and subsequently a permit was granted. After high spring water levels in 2006, a survey revealed that the dam was no longer present, likely having been washed out by runoff.

In September 2006, two wildfires were found in Reindeer Island Ecological Reserve. In keeping with existing policy, where such fires occur in remote areas set aside for natural processes, the fires were permitted to burn. Both fires were extinguished naturally.

Public Information and Outreach

The Ecological Reserves Program has its own webpage which is accessible through the Parks and Natural Areas homepage. This webpage contains downloadable versions of the 1994 to 1999 and 1999 to 2004 Five-year Reports to the Legislature, as well as French and English versions of the 2004 to 2009 report. Background information for the six ecological reserves designated during this reporting period are also posted on the Ecological Reserves Program webpage. Background information to be posted on the website for the remaining 17 ecological reserves was drafted and there are plans to post this information within the next reporting period. The webpage can be accessed at **manitoba.ca/conservation/parks/ecological_reserves/index.html.**

During the reporting period, boundary signs were purchased to be placed along the boundaries of ecological reserves. Entry signs were purchased for the Jennifer and Tom Shay, Birch River and Brokenhead Wetland Ecological Reserves.

The Next Five Years

Ecological reserves will continue to play a special role as the most protected of the provincially designated lands in Manitoba's network of protected areas. Recreational and resource harvest activities will continue to be prohibited, while acknowledging and accommodating traditional Aboriginal and treaty rights. It can sometimes be challenging to establish new ecological reserves because of existing resource use, recreational commitments and interests. Nevertheless, the program will continue focusing on creating new ecological reserves to ensure that Manitoba's most unique and sensitive areas will be protected for future generations.

The Ecological Reserves Program has achieved significant results during the 2004 to 2009 reporting period, including the designation of six new ecological reserves. Over the next five years, the program will move several candidate ecological reserves forward. Future program goals include:

- designating new ecological reserves
- reviewing and evaluating nominations for proposed ecological reserves
- recommending to the conservation minister multiple proposed ecological reserves for consideration

During the next five years, the program will work with scientists, naturalists and First Nations traditional ecological knowledge holders to recognize and document additional areas of ecological significance in Manitoba. This will ensure the continued documentation of important sites worthy of protection.

Background information for all designated ecological reserves, ecological issues and additional regular updates to the website will help increase public education.

This will support efforts to achieve greater compliance with existing regulations, particularly those prohibiting the use of vehicles in ecological reserves.

Work will continue on the development of a regulation to clarify the permitted uses and activities in ecological reserves.

Efforts will continue to evaluate ways of streamlining the review and consultation process for proposed ecological reserves. Aspects to be addressed include:

- identifying internal government constraints that may delay their designation
- evaluating ways these constraints could be reduced

The implications and feasibility of applying interim protection while detailed discussions continue on specific sites would also be evaluated.

Appendix 1 - Ecological Reserves Program Structure

Program Administration

The Ecological Reserves Act allows the lieutenant governor in council to appoint an Ecological Reserves Advisory Committee. The committee provides advice about the establishment of ecological reserves, and their stewardship, to the minister responsible for administering the act. Under the act, the committee sets its own rules of procedure. In accordance with the act, the minister has requested the committee to:

- examine, inspect and recommend on the suitability of candidate areas
- receive, consider and recommend on submissions from the public
- provide, or make available to the public and government, information on ecological features and ecologically significant areas in Manitoba
- advise on administration of the act

Since 1992, the Parks and Natural Areas Branch has administered the Ecological Reserves Program. The director of Parks and Natural Areas also acts as director of ecological reserves in accordance with *The Ecological Reserves Act*. One branch staff person administers the Ecological Reserves Program and acts as secretary to the Ecological Reserves Advisory Committee. Parks and Natural Areas Branch also provide general administration of the program including:

- management and direction
- liaison with staff of other branches and regional staff of Manitoba Conservation and with other government agencies and departments
- program planning, policy and procedure formulation and implementation
- legislation development
- budget co-ordination, allocation and control

Proposals for development activities (road upgrades, forest harvest, gravel pits, municipal plans, Crown land sales, etc.) in the areas surrounding ecological reserves are screened to ensure that they do not affect existing or proposed ecological reserves.

Site Nomination and Review Process

Candidate sites for ecological reserves can be proposed by any individual or organization. Nomination forms for proposing candidate ecological reserves can be found on the Ecological Reserves Program website at **manitoba.ca/conservation/parks/ecological_reserves/index.html.**

Available information on proposed candidate sites is compiled and incorporated into draft nominations for committee review. The committee reviews draft nominations, provides additional information, suggests revisions, or requests additional information as needed. Once the committee is satisfied that a site nomination is complete, the nomination is formally considered at a committee meeting. Approved nominations recommended for designation are submitted to the conservation minister.

The next steps in the process towards designating an ecological reserve are complex. This process is not linear, but rather different stages can take place simultaneously. Candidate ecological reserves for which nominations are made, or have been simply identified by the Ecological Reserves Advisory Committee as having great potential as ecological reserves, are included in the Protected Areas Initiative consultation process. This process focuses on the mining and forestry sectors and First Nations. Nominated sites then go through a formal internal government and external review process. Where there is support for designation from these consultations and reviews, sites are submitted to the final government review process to ensure no other agencies may have concerns with designation. Only rarely are sites with unresolved issues submitted to cabinet for resolution.

The time frame from when a candidate ecological reserve is first proposed, to the time its nomination form is approved by the committee, to the end of internal government review and external consultation takes years. Typically, candidate ecological reserves are reviewed at the same time as other potential protected areas to decrease the number of times reviews and consultations are done. This extended time frame and packaging of joint reviews means that often years go by with no ecological reserves being designated and then several designations occur quite close together.

Appendix 2 - Ecological Advisory Committee Comments

On the Five-year Report to the Legislature 2004-2009

As in the past two five-year reports, the Ecological Reserves Advisory Committee would like to make several comments and recommendations. The committee stands by its previous comments and recommendations and provides these additional comments.

The committee feels there are several problems that affect the Ecological Reserves Program and therefore the government's efforts to conserve sites in Manitoba that are of highest ecological importance.

- The rate at which lands are being protected in Manitoba has fallen behind the rate at which land is being developed.
- The money spent on the Ecological Reserves Program ($25,000 annually forecast for 2009/2010; and was $30,900 in 1982/83) does not compare to the amount of money that goes into the development of natural resources through industries such as mining, forestry and hydro-electric projects. This is an obvious imbalance in the monetary resources available for the protection and management of natural resources as compared to that available for development.
- A lengthy government review process involving competitive or conflicting internal claims for property resources results in ecologically significant areas being unprotected and subsequently developed in some way instead of being conserved as ecological reserves.
- There has been a lack of progress towards establishing even a single ecological reserve in the two areas where, biologically, ecological reserves are needed most – the mixed-grass prairie and tall-grass prairie communities of southern Manitoba.

One of the four principal duties of the Ecological Reserves Advisory Committee is to advise on the administration of the act. Each five-year report has pointed out that the administrative process is ineffectual, as reflected in the poor productivity of the program. The committee strongly recommends again in this current report that the conservation minister review the administration of the Ecological Reserves Program and institute the required amendments to permit advancement of the program through increasing the rate at which ecological reserve proposals are reviewed internally. The Ecological Reserves Advisory Committee poses the following questions to the conservation minister:

- Do the goals and procedures of the Ecological Reserves Program and the Ecological Reserves Committee meet government's objectives for conserving Manitoba's biodiversity and lands?
- What is Manitoba Conservation's goal for the number of ecological reserves designated annually? The Ecological Reserves Advisory Committee can nominate at least three sites per year. Can the government act to designate at least this many sites per year?
- What are the plans for addressing the decade-long, back-log of the 17 nominated proposed ecological reserves?
- If the Nature Conservancy of Canada, Manitoba Region, is able to conserve

annually (through purchase and easement) an average of 15 properties, and the Manitoba Habitat Heritage Corporation several hundred properties, on private lands, why can't the provincial government designate more than one new ecological reserve every 19 months on Crown lands, most of which are of small size and in wilderness areas?

The Ecological Reserves Advisory Committee recommends that the following actions take place in order for the Ecological Reserves Program to preserve for posterity: unique and rare examples of botanical, zoological and geological features of the province; examples of natural habitats of rare or endangered plants and animals that are native to the province; representative examples of natural ecosystems in the province; and representative examples of ecosystems in the province that have been modified by man and that offer opportunities for the study of, and research into the recovery of the ecosystems from modification.

Recommended actions:

- More resources should be directed to the program to improve productivity and demonstrate that biodiversity and landscape conservation is important.
- The Ecological Reserves Program should be underpinning the protection of threatened and endangered species in the province. The Ecological Reserves Advisory Committee should be working more closely with the Endangered Species Advisory Committee to identify critical areas that should be protected as ecological reserves.
- Ensure that the process of designating ecological reserves is closely linked to people at the community level with an interest in stewardship. The Ecological Reserves Program should be more grounded at the grass route level. It needs to ally with people interested in preservation, protection and good stewardship. Stakeholders should become more involved in the process.
- Lands need to be protected to enhance the overall well-being of present and future generations of Manitobans. The Ecological Reserves Advisory Committee challenges the Manitoba government to designate three ecological reserves a year over the next five years.

In summary:

- The rate at which ecological reserves are protected needs to increase if the province wants to be able to adequately protect lands and biodiversity and meet its responsibilities in these areas.
- Knowledgeable and interested members of the public should become more involved in the process of conservation.
- The Ecological Reserves Program should work more closely with other conservation-minded programs and committees such as the Endangered Species Advisory Committee.

Colonial bird nesting area on Kaweenakumik Islands Ecological Reserve.

Manitoba Conservation
Parks and Natural Areas Branch